

Land Use Goals

The three land use alternatives are based on the goals for the Study Area established by the City Council. Summarized in **Table 1.2**, the goals fall into six broad categories:

- Community Quality of Life
- Connections
- Economic Sustainability
- Environmental Sustainability
- Future BART Station
- Job Retention and Creation

The land use goals for the Study Area are consistent with and further the vision of Fremont’s draft General Plan 2030. In the draft General Plan 2030, it is the City’s vision that over the next twenty years, Fremont becomes a national model on “how the auto-oriented suburb can evolve into a sustainable, strategically urban, modern city.” The draft General Plan 2030 focuses on creating more resident workforce by increasing the number of jobs within the City and maintaining a diverse population through development of a wider range of housing options, including more pedestrian-oriented commercial districts and downtown character. The City also envisions a “greener” future by reducing solid waste production, creating a stronger network of bike and pedestrian systems, and meeting climate change objectives and policies.

2. LAND USE CONSIDERATIONS

The Study Area, an industrial area with a variety of production, manufacturing, and warehousing businesses, as well as vacant land, offers unique challenges and considerations when planning for improvements, “next generation” enterprises, and mixed-use neighborhoods. Land use considerations in the area include:

- Intensive Industrial Uses
- Compatibilities and Adjacencies
- Industrial, Railroad and Freeway Buffers
- Vacant and Underutilized Lands
- TOD at BART
- Residential Uses – Critical Mass

Intensive Industrial Uses

The Study Area contains one of the last large and contiguous industrial areas within the Bay Area. Well served by existing infrastructure and utilities, it has direct or convenient access to several railroads, freeways, ports, and Bay Area airports, which makes the area ideal for industrial and warehouse uses. Careful consideration should be given to the introduction of activities that could impair existing industrial operations or create future land use conflicts. As important, many industrial uses create noxious side-effects, including noise, dust, truck traffic, rail traffic, and hazardous materials, which are incompatible with some non-industrial uses, including those involving sensitive populations (e.g., children, elderly).

The draft General Plan 2030 Land Use and Economic Development Goals and Policies include the following:

- Ensure that adequate industrial land is available to accommodate a wide range of industrial uses, including those with intensive operations.
- Protect industrial areas from encroachment by activities that would impair operations, prevent operations expansion, or create conflicts with non-industrial uses.
- Limit large-scale, regional retail uses and shopping centers in industrially zoned areas.
- Ensure that uses that are potentially incompatible with industrial are not permitted (or are conditionally permitted, as appropriate) in the City’s general industrial zones.
- Emphasize that industrial businesses have the exclusive right to operate as allowed by the district. Non-industrial uses proposed that would limit industrial operations shall not be allowed to locate in industrial zoned areas.

In consideration of the land uses, there is an effort to retain a majority of the industrial use within the Study Area, while allowing for variations in the amount of commercial and residential introduced into the area. In addition, the alternatives recognize that Union Pacific’s rail switchyard, located adjacent to and east of Tesla Factory, will likely remain in active use and include a minimum 15-acres of rail-related uses on Parcel 1.

Compatibilities and Adjacencies

Industrial uses create opportunities and challenges for adjacent uses. Adjacent industrial uses can provide supporting services to other industries in the area, share similar “noxious” side-effects, and are compatible with and dependent on the intensive industrial operations and supportive ancillary uses in the area (e.g., railyards, freeways). Related industries can also have a synergistic impact on one other, creating “hubs of innovation.” Silicon Valley itself is one such example.

Tesla Motors, and its innovations in electric vehicle manufacturing, is a compelling anchor in the area for other innovative and related industries. In general, many uses benefit from co-locating with each other, such as R&D (research and development) facilities with commercial office or a technical high school. Using Tesla as a starting anchor for the Study Area, Fremont has the opportunity to create a multi-use “tech zone” similar to Chicago’s stockyards, the Porsche factory in Stuttgart, Germany, or China’s modern industrial parks. While the Tesla factory may be a compelling anchor, care should be taken to allow for a diversity of industrial and commercial enterprises.

In addition to land use compatibilities, other challenges in the area include the railroad track which effectively divides the Study Area in half. While the railroad is greatly beneficial for certain land uses, such as manufacturing and distribution, the tracks may create a divide if, in the future, the entire Study Area is envisioned to take on a more integrated land use strategy.

Industrial, Railroad and Freeway Buffers

Industrial uses may have operational characteristics that may be incompatible with non-industrial uses, particularly those with sensitive users (e.g., children, elderly). Other considerations include hazards related to active rail yards and air quality from freeway traffic. Buffers can protect and minimize such hazards and may take the form of other land uses, such as commercial, R&D, and open-space corridors. In the alternatives described below, the buffers take the form of commercial office and/or commercial/industrial R&D to create a transition between housing and byproducts generated by industrial uses.

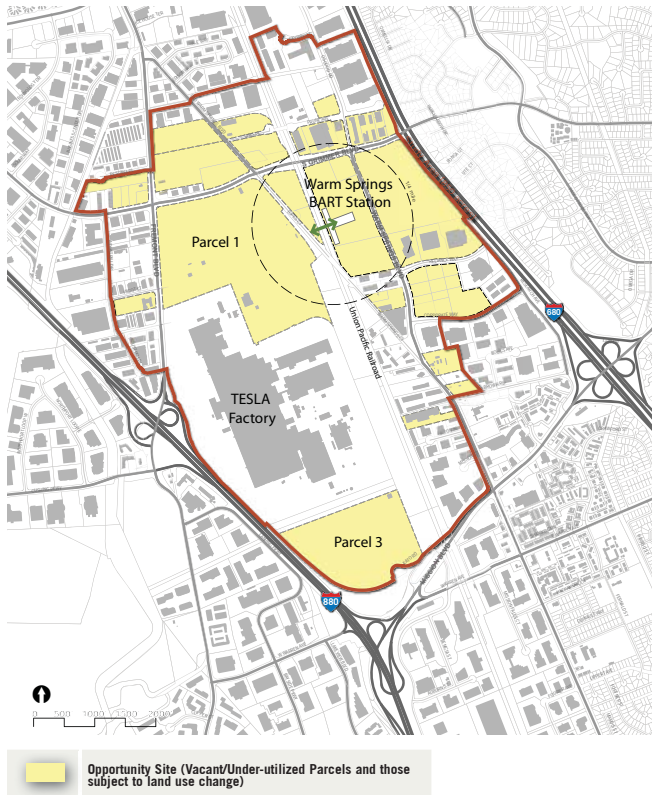
For the purposes of this Study, and particularly in laying out potential locations for residential uses, the following assumptions on the size (width) of buffers were established:

- Railroad Buffer: 500-foot setback from rail
- Freeway Buffer: 500-foot setback from Interstates 680 and 880, consistent with the California Air Resources Board “Air Quality and Land Use Handbook: A Community Health Perspective” and the San Francisco Department of Public Health’s “Healthy Development Measurement Tool”.
- Industrial Buffer: 800-meter buffer for initial evacuation distances for railcar sized incidents involving flammable liquids; 800-meter buffer for cryogenic Hydrogen; and 1,600-meter if larger tanks are involved.



To protect from poor air quality and transport of hazardous materials, residential uses will need to be set back from the railroad, freeways and hazardous industrial sites.

Figure 2.1 Opportunity Sites



Vacant and Underutilized Lands

Illustrated in **Figure 2.1**, the Study Area includes a large number of vacant and underutilized lands (i.e., parcels with uses that do not maximize the allowed intensity of the industrial zoning), creating opportunity sites for new development. The largest vacant parcels are the Union Pacific owned Parcels 1 and 3, north and south of the Tesla factory respectively, and parcels adjacent to the planned BART station. Parcel 1 and those adjacent to the BART Station offer opportunities for a jobs-focused or housing-focused TOD. It should be noted that Parcel 1 would likely include a minimum 15-acres of rail-related uses, operated by Union Pacific Railroad, adjacent to the Tesla factory. In addition to the vacant and underutilized lands, the Study Area includes other parcels subject to land use change, based on private party interest in land use conversion. **Figure 2.1** illustrates all lands that may be considered opportunity sites for purposes of this Study. All other parcels are anticipated to remain in industrial operations for the foreseeable future.

Explained in more detail below (see Land Use Categories and Metrics), the opportunity sites are used to calculate future jobs and development growth based on established land use metrics.

TOD at BART

The planned Warm Springs BART extension and station, now under construction, offers opportunities for Transit-Oriented Development (TOD) generally within ¼ to ½ mile of the station. The TOD can be jobs-focused or housing-focused, with a greater density of development near the station critical for maximizing transit use and minimizing automobile use. The parcels near the station are appropriate for office and R&D uses, including a high-tech corporate campus, and/or a high-density residential neighborhood. Retail is best integrated into the overall TOD district, and it should have visibility along Grimmer Boulevard.

Strong pedestrian/bike connections to the station from throughout the Study Area, particularly related to housing, are important for the success of the BART station and TOD district. A pedestrian/bicycle crossing through the BART station and over the railroad tracks is essential for connecting the BART station with parcels and businesses west of the tracks. For the entire Study Area, the planned BART station offers a convenient alternative for commuters.

Residential – Critical Mass

As noted above, the industrial character of the Study Area offers challenges for locating residential uses in this area. In addition, the area is isolated from other residential neighborhoods in Fremont, which can result in safety concerns (e.g. truck traffic during the day, abandoned streets at night, fewer “eyes on the street”) and lack of services (e.g. lack of stores, playgrounds, parks, schools, and other community facilities). On the other hand, the planned BART station offers opportunities for a higher-density mixed-use TOD district. Under these circumstances, it is essential that a critical mass of housing be provided to create a high-quality residential neighborhood, one that is large and dense enough to create a self-sufficient residential community, with a range of housing choices, which can support parks, other common area amenities, and some increment of daily needs shopping.

For purposes of this Study, 2,500 residential units are targeted to be located near, ideally $\frac{1}{4}$ mile from, the planned BART station. The housing type should be higher density but offer enough variety to accommodate a range of household types, including families. A mixed-use residential neighborhood of this type would nicely complement adjacent innovative industries, creating a live-work district in this portion of Fremont. It is important that buffers exist between the residential enclave and industrial uses along with setbacks from the rail line and freeway. Such buffers can take the form of office and office/R&D development in addition to open space.

Three housing types are considered for this area:

- Two- to three-story town homes, built at 20 to 30 units per acre, with an at-grade entry and garage.
- Four-story stacked flats or town homes, built at 30 to 50 units per acre, with grouped parking or a ground-level podium parking garage. This housing type could be a “3 over 1” configuration (assuming ground-level podium parking), with three levels of Type V-A (wood frame) construction over one level of Type 1 (concrete) construction, with a building height not to exceed 50 feet. Alternatively, this housing type could be housing wrapped around a central parking structure.
- Five-story stacked flats or town homes, built at 50 to 70 units per acre, on top of a ground-level podium parking garage. This housing type could be a “4 over 1” configuration, with four levels of Type V-A (wood frame) construction over one level of Type 1 (concrete) construction, with a building height not to exceed 50 feet. Alternatively, this housing type could be housing wrapped around a central parking structure.

For this Study in Alternatives 2 and 3, the higher density housing east of the station would be 50% four-story stacked town homes and 50% five-story stacked flats. In Alternative 3, a slightly broader range of housing types is applied to Parcel 1 west of the tracks, that is $\frac{1}{3}$ town homes, $\frac{1}{3}$ four-story stacked town homes, and $\frac{1}{3}$ five-story stacked flats.